

Carolina grasshopper

Dissosteira carolina

By Shane Sater



It hides as a sand-colored lump, blending in with the dry soil. But as soon as the Carolina grasshopper leaps into flight, its camouflage is shattered. Lumbering through the air, the winged insect reveals its distinctive black hindwing edged with yellow. Of Montana's 90-plus grasshopper species, this one is the easiest to identify. Along roadsides and barren areas throughout the state, it's a characteristic part of Montana's late summer landscape.

IDENTIFICATION

This is one of the largest grasshoppers in Montana. Look for a jumbo-size 'hopper as long as the end two joints of your index finger—roughly 2 inches—and only slightly less thick. Good luck spotting one on the ground, though: The Carolina grasshopper is well-concealed, with a body ranging from dark gray to sandy pink, depending on local soil color. The easiest way to identify one is when it leaps into flight. This is the only grasshopper in Montana whose hindwing is mostly black, bordered by a narrow yellow band.

The wing color is confusingly similar to that on Montana's state butterfly, the mourning cloak (*Nymphalis antiopa*). But compared to the mourning cloak, the Carolina grasshopper's flight is less floppy, and when it lands you can see that it's not a moth.

HABITAT

This grasshopper likes barren areas. Look for it along roadsides and railroad tracks, on dry lake beds, and around abandoned urban lots. All these habitats feature mostly bare ground with a few grasses and weeds.

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DIET

Carolina grasshoppers have a broad and flexible diet. Depending on where they live, they can thrive on weedy plants like smooth brome and kochia, or on native grasses and broadleaved plants such as western wheatgrass and scarlet globemallow.

LIFE CYCLE

In late summer, male Carolina grasshoppers are busy trying to attract females, making soft crackling sounds in flight as they flash their colorful wings. The males move frequently, flying and crawling in search of a mate. They occasionally make a quiet rasping song from the ground, rubbing their hind legs against their forewings.

After mating, the female looks for a patch of bare soil in which to lay her eggs. With the tip of her abdomen, she inserts a C-shaped egg pod into the soil, burying it an inch or two deep. An egg pod contains 40 or more individual eggs.

Carolina grasshoppers survive Montana's harsh winter in the egg stage, tucked in their

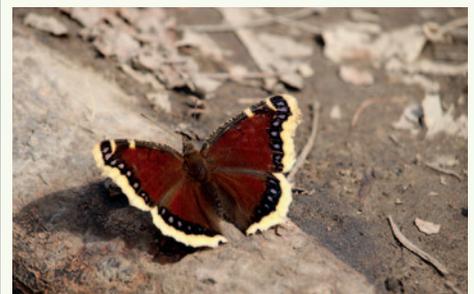
underground pod. Early in the summer, the nymphs hatch. After 45 days or so of feeding, the nymphs develop into reproductively mature adults, which begin to appear in July. The adult grasshoppers survive until the first hard frosts.

PREDATION

In late summer, grasshoppers are consumed by a wide variety of wildlife, from meadow voles and deer mice to western meadowlarks and even Swainson's hawks. As anglers know, trout and other surface-feeding fish will snap up grasshoppers that get wind-blown onto a stream or river. Spiders and some species of sphecid wasps also hunt adult grasshoppers, and the larvae of some blister beetle and bee fly species feed exclusively on grasshopper egg pods.

CONSERVATION STATUS

Like rock pigeons and white-tailed deer, the Carolina grasshopper is one of those hardy species that thrives where humans live. As long as we have places with bare soil and a few weeds, Carolina grasshoppers are likely to remain as reliable residents of Montana's barren areas during late summer. 🐘



Wing patterns of the Carolina grasshopper, left, and the mourning cloak butterfly, above.